## (19) World Intellectual Property Organization International Bureau



## I FORMA BINDADA IN CARNE CIAN CALIN CALLA CANA I II AN CARNA CANA CALIN CALIN CALIN CALIN CALIN CALIN CALIN CAL

(43) International Publication Date 16 June 2005 (16.06.2005)

PCT

## (10) International Publication Number WO 2005/054447 A2

(51) International Patent Classification<sup>7</sup>: A61K 35/44

C12N 5/06,

(21) International Application Number:

PCT/GB2004/005101

(22) International Filing Date: 3 December 2004 (03.12.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 0328021.1

3 December 2003 (03.12.2003)

- (71) Applicant (for all designated States except US): INSTITUTE OF OPHTHALMOLOGY [GB/GB]; 11-43 Bath Street, London EC1V 9EL (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): KHAW, Peng, Tee [GB/GB]; Institute of Ophthalmology, 11-43 Bath Street, London EC1V 9EL (GB). LIMB, Gloria, Astrid [GB/GB]; Institute of Ophthalmology, 11-43 Bath Street, London EC1V 9EL (GB).
- (74) Agent: GILL JENNINGS & EVERY; Broadgate House, 7 Eldon Street, London EC2M 7 LH (GB).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MÜLLER STEM CELLS

(57) Abstract: A method for the production of retinal cells, useful in transplantation therapy, comprises: (i) obtaining one or more mammalian adult Müller cells; and (ii) culturing the cells in the presence of an extracellular matrix protein and a growth factor to thereby induce dedifferentiation of the Miller cells into a progenitor phenotype.